

Thickness of Unconsolidated Deposits of Boone County, Indiana

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IDENTIFICATION_INFORMATION

Citation:

Citation_Information:

Originator: Glenn Grove, IDNR, Division of Water, Ground Water Section

Publication_Date: 200210

Title: Thickness of Unconsolidated Deposits of Boone County, Indiana (Indiana Department of Natural Resources, Division of Water, 1:24,000, Line Coverage)

Edition: 1.0

Geospatial_Data_Presentation_Form: Map

Publication_Information:

Publication_Place: Indianapolis, Indiana, USA

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details: This map was compiled from published maps at 1:24,000 scale (Bedrock Topography of Boone County, Indiana and USGS hypsography digital line graph (DLG) for all the quadrangles in Boone County): see Data Quality Information section for details about the individual maps that were merged to make the composite map.

Online_Linkage:

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Description:

Abstract: This file is a digital geospatial line coverage of the unconsolidated thickness Boone County, Indiana. The mapping was conducted using USGS hypsography (surface contours) digital line graph coverages and bedrock topography coverage of Boone County, Indiana. The two coverages were converted into ArcInfo Triangulated Irregular Networks (TIN), a product of ESRI. These TINs were then converted into 10 meter grids and the latter subtracted from the former to produce the unconsolidated thickness grid. The resulting grid was then filtered using a low pass filter with 25 iterations to produce smoother lines when contoured. Then new grid was contoured in ArcInfo using *latticecontour* with a 25 foot interval. Primary attribute is the thickness of the unconsolidated deposits.

Purpose: Display and/or analyses requiring unconsolidated thickness contours Boone County, Indiana Indiana. The coverage is suitable for use in a Geographic Information System.

Supplemental_Information:

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2002

Ending_Date: 2002

Currentness_Reference: publication date

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None planned.

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: 521268
East_Bounding_Coordinate: 574818
North_Bounding_Coordinate: 4455631
South_Bounding_Coordinate: 4413728

Keywords:

Theme:

Theme_Keyword_Thesaurus: None
Theme_Keyword: geology
Theme_Keyword: unconsolidated thickness

Place:

Place_Keyword_Thesaurus: None
Place_Keyword: Boone County, Indiana Indiana, USA

Access_Constraints: This file is available to anyone, but access may be contingent on written request, specific terms relevant to the agency or person making the request, and/or current freedom of information statutes in the State of Indiana.

Use_Constraints: Acknowledgement of the following agency in products derived from these data: Indiana Department of Natural Resources, Division of Water. This map was compiled by staff of the Indiana Department of Natural Resources, Division of Water using data believed to be reasonably accurate. However, a degree of error is inherent in all maps. This product is distributed "as-is" without warranties of any kind, either expressed or implied. The maps are intended for use only at the published scale.

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Point_of_Contact:

Contact_Information:

Contact_Organization_Primary:
Contact_Organization: Indiana Department of Natural Resources, Division of Water
Contact_Person: Glenn Grove
Contact_Position: Engineering Geologist
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Address_Type: Mailing and physical address
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State_or_Province: Indiana
Postal_Code: 46204
Country: USA
Contact_Voice_Telephone: 317-232-4160
Contact_Facsimile_Telephone: 317-233-4579
Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us

Native_Data_Set_Environment:

ArcGIS version 8.2 line coverage format
Approximate size 1 MB
Bo_unc_qul

DATA_QUALITY_INFORMATION

Attribute_Accuracy:

Attribute_Accuracy_Report: The digital mapping was conducted by converting the coverages into 10 meter grids. The 10 meter grid reduces the accuracy of the contouring and may possibly produce significant error in areas where one or both maps have a high density of contours. However, the broad 25 foot contour range should mitigate this effect.

Logical_Consistency_Report:

Completeness_Report: The map represents all of Boone County.

Positional_Accuracy: The locations of the contours are based on the difference between grids of the bedrock surface topography and USGS hypsography DLG's. Resultant grids were contoured in ArcInfo.

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report: The locations of the contours are based on the difference between grids of the bedrock surface topography and USGS hypsography DLG's. Resultant grids were contoured in ArcInfo. The grid spacing was 10 meters for each grid. There might be an offset of as much as 10 meters for each grid.

Vertical_Positional_Accuracy:

Vertical_Positional_Accuracy_Report: In general the vertical accuracy should be within 25 feet. In areas where the contours are close together in one or both coverages the vertical accuracy may be reduced significantly.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Indiana Department of Natural Resources, Division of Water

Publication_Date: 200210

Title: Thickness of Unconsolidated Deposits of Boone County, Indiana (Indiana Department of Natural Resources, Division of Water, 1:24,000, Line Coverage)

Edition: 1.0

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Indianapolis, IN

Publisher: Indiana Department of Natural Resources, Division of Water

Other_Citation_Details:

Online_Linkage:

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 1:24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: IDNR_DOW_Unconsolidated thickness_map_of Boone County

Source_Contribution: water well records from the IDNR-DOW well record archives, seismic data, oil and gas records, publications

Process_Step:

Process_Description: Staff of the IDNR-DOW conducted bedrock mapping for Boone County from 1997 through 2002. The mapping was typically at a 7.5 minute quadrangle scale of 1:24,000. Data were selected by careful evaluation of water well records to determine if the records were located and if they contained complete and reasonable information. In other areas, where appropriate, additional data such as seismic shots or oil and gas records were used. The mapping was conducted on a mylar sheet (on file at the IDNR-DOW). For details see metadata for Boone County.

Source_Used_Citation_Abbreviation: IDNR-DOW water well records for domestic wells submitted by water-well drillers from 1956-2002

Process_Date: 2002

Source_Produced_Citation_Abbreviation:

Process_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Organization: Indiana Department of Natural Resources, Division of Water

Contact_Person: Glenn Grove

Contact_Position: Engineering Geologist

Contact_Address:

Address_Type: Mailing and physical address

Address: 402 W. Washington Street, Room W264

City: Indianapolis

State_or_Province: Indiana

Postal_Code: 46204

Country: USA

Contact_Voice_Telephone: 317-232-4160

Contact_Facsimile_Telephone: 317-233-4579

Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us

Hours_of_Service: 8:15am - 4:15pm

Process_Step:

Process_Description: USGS digital hypsography (land surface contours) was compiled for the following USGS Quadrangle maps: Carmel, Colfax, Fayette, Hazelrigg, Kirklin, Lebanon, Lizton, Mechanicsburg, New Ross, Rosston, Shannondale, Sheridan, Thorntown, Westfield, and Zionsville. The digital hypsography was merged into one coverage. (personnel: Glenn Grove)

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 1999 and 2001

Title: USGS Digital Hypsography

Edition:

Geospatial_Data_Presentation_Form: DLG-3

Publication_Information:

Publication_Place: Reston VA

Publisher: U.S. Geological Survey

Other_Citation_Details:

Online_Linkagehttp://edcftp.cr.usgs.gov/pub/data/DLG/LARGE_SCALE/

Larger_Work_Citation:

Citation_Information:

Originator:

Publication_Date:

Title:

Publication_Information:

Publication_Place:

Publisher:

Online_Linkage:

Source_Scale_Denominator: 24,000

Type_of_Source_Media:

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date:

Ending_Date:

Source_Currentness_Reference: Publication date

Source_Citation_Abbreviation: USGS

Source_Contribution:

Process_Step:

Process_Description: The bedrock and USGS hypsography maps were developed at a scale of 1:24,000. The two coverages were converted into ArcInfo Triangulated Irregular Networks (TIN), a product of ESRI. These TINs were then converted into 10-meter grids and the latter subtracted from the former to produce the unconsolidated thickness grid. The resulting grid was then filtered using a low pass filter with 25 iterations to produce smoother lines when contoured. Then the grid was contoured in ArcInfo using lattice contour with a 25-foot interval.

Source_Used_Citation_Abbreviation:

Process_Date: 2002

Source_Produced_Citation_Abbreviation:

Process_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Organization: Indiana Department of Natural Resources, Division of Water

Contact_Person: Glenn Grove

Contact_Position: Engineering Geologist

Contact_Address:

Address_Type: Mailing and physical address

Address: 402 W. Washington Street, Room W264

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State_or_Province: Indiana

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Country: USA

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Contact_Facsimile_Telephone: 317-233-4579

Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us

Hours_of_Service: 8:15am - 4:15pm

SPATIAL_DATA_ORGANIZATION_INFORMATION

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains

Point_and_Vector_Object_Count: 1

SPATIAL_REFERENCE_INFORMATION

Horizontal_Coordinate_System_Definition:

Planar:

Grid_Coordinate_System:

Grid_Coordinate_System_Name: Universal Transverse Mercator

Universal_Transverse_Mercator:

UTM_Zone_Number: 16

Transverse_Mercator:
Scale_Factor_at_Central_Meridian: 0.999600
Longitude_of_Central_Meridian: -87.000000
Latitude_of_Projection_Origin: 0.000000
False_Easting: 500000.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: Coordinate pair
Coordinate_Representation:
Abscissa_Resolution:
Ordinate_Resolution:
Planar_Distance_Units: Meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.4000000
Denominator_of_Flattening_Ratio: 294.98

ENTITY_AND_ATTRIBUTE_INFORMATION

Overview_Description:

Entity_and_Attribute_Overview: The arcs in this file represent calculations of unconsolidated thickness, derived by subtracting the surface topography grid from the bedrock-surface topography grid and then contoured in ArcInfo. The file was created for the purpose of characterizing the unconsolidated thickness as a tool to help assess the ground water resources of Boone County, Indiana.

Entity_and_Attribute_Detail_Citation:

Detailed_Description:

Entity_Type:

Entity_Type_Label: boone_unc_qul.aat
Entity_Type_Definition: arc attribute table
Entity_Type_Definition_Source: None

Attribute:

Attribute_Label: Contour
Attribute_Definition: the thickness of the unconsolidated material in feet
Attribute_Definition_Source: IDNR-DOW, Ground Water Section
Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 25
Range_Domain_Maximum: 375

Attribute_Units_of_Measure: integer
Attribute_Measurement_Resolution: 25 foot contour interval.
Attribute_Value_Accuracy_Information:
Attribute_Value_Accuracy:
Attribute_Value_Accuracy_Explanation:

DISTRIBUTION_INFORMATION

Distributor:

Contact_Information:

Contact_Organization_Primary:
Contact_Organization: Indiana Department of Natural Resources, Division of Water
Contact_Person: Glenn Grove
Contact_Position: Ground Water Section
Contact_Address:

Address_Type: Mailing and physical address
Address: 402 W. Washington Street, Room W264
City: Indianapolis
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Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us
Hours_of_Service: 8:15am - 4:15pm

Resource_Description:

Distribution_Liability: The Indiana State Department of Natural Resources Division of Water has compiled this data set using data believed to be reasonably accurate; however, the Division makes no representation as to the accuracy, completeness, or usefulness of the data or data set. Reference to any specific commercial product, process, or service does not constitute an endorsement, recommendation, or favoring by the Division.

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METADATA_REFERENCE_INFORMATION

Metadata_Date: 20021030

Metadata_Review_Date:

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Indiana Department of Natural Resources, Division of Water

Contact_Person: Glenn Grove

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Address_Type: Mailing and physical address

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City: Indianapolis

State_or_Province: Indiana

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Contact_Facsimile_Telephone: 317-233-4579

Contact_Electronic_Mail_Address: ggrove@dnr.state.in.us

Hours_of_Service: 8:15am - 4:15pm

Metadata_Standard_Name: FGDC CSDGM

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Use_Constraints: This metadata file is intended to accompany the subject geospatial data set. This file may be updated, and the most recent version is available by contacting the IDNR, Division of Water.